BUCHANAN'S

# JOURNAL OF MAN.

VOL V. JULY 15, 1855. No. 7.

## THE COSMIC EXPRESSION OF LOVE.

The pathognomic philosophy has a grand and beautiful illustration in the forests, shrubbery and herbage that cover the face of the earth. The upward and expansive course of the forest growth obeys the same mathematical law of developement as the upward growth of the moral organs of man.* Whatever in the outer world exhibits this upward tendency, corresponds in its fundamental character with our moral nature, and our moral faculties respond at once to its presence.

The vegetable kingdom is the expression—the embodyment of Divine benevolence, for it springs up not only to beautify the earth, but to sustain the millions of happy beings, whose existence depends entirely upon the growth of plants which appear to have been created especially for them.

As an expression of benevolence it not only enriches and sustains the receivers, but sympathetically excites their loving emotions, and thus supplies an influx of moral food, as well as physical nourishment. And as from a barren and desolate earth, no animal life could spring, because unsustained by the embodied benevolence of the vegetable kingdom, so does our moral nature languish when deprived of access to this expression of Divine benevolence, and the pleasure of contemplating that which embodies the Divine love in contributing to human sustenance.

How desolate is every landscape, how dreary and blighting to our nobler sentimennts, when shorn of foliage—when no longer tree or shrub, flower or grass can be seen above the lifeless clod. How coarse and

*For a full developement of the pathognomic or mathematical laws, see Part Third of Buchanan's Anthropology.

wretched is every country dwelling where the forests and grass have been trampled away,—where nought but plowed grounds, pig-pens, mud and dust, occupy the landscape. How dreary a Gehenna is the grave-yard, where the grass has been destroyed—where the willow, the elm, the cypress and the rose have been cut away, leaving but dirt and desolation behind in place of the charming verdure of nature.

The cemetery tastefully arranged, where luxuriant trees rise to the sky—where the green grass and flowering shrubs diversify the scenery, is a fitting abode for the remains of the dead, and sweetly teaches the benignant lesson, that in death we lie down in the arms of Omnipresent goodness, to renew our existence in that sphere of calmness and beauty to which the whispering leaflets of the treetops point, and from which the flowers reflect supernal beauty.

It is not merely as a matter of poetical sentiment that I refer to the umbrageous grandeur of the forest. I would speak of it as the vast expression of Divine goodness, continually addressing itself to the soul of man gracefully and impressively, in many thousand forms, but ever in strict accordance with those mathematical laws of the universe, which in their application to man, constitute the science of Pathognomy.

A country life, amid the beauties of Nature, has always been deemed more congenial to moral growth, better adapted to purifying and elevating the character, than dwelling among the brick walls and dusty barren streets of cities.

When our good angels are with us—when love and other lofty emotions are vividly realized, we seek with unquenchable ardor, the leafy groves and sylvan scenes, in which Nature gloriously responds to the Divine life that is stirring within us. It is not merely to cool and purify the air that London and Paris appropriate millions to their parks. For such a purpose the cheaper plan of cleaning and watering the streets would be more effective. But nothing else can supply the place of that moral and refining influence, which hallows the presence of the venerable oaks and elms, the verdant turf, the clumps and copse where Nature, like a kind and playful mother, gives her nearest presence and sweetest converse to her children.

To the analytic and philosophic mind, it is deeply interesting to trace in all this the explicit illustration of the mathematical laws which identify cerebral developement, psychological growth, and Divine creation all governed by one law alike.

To the practical philanthropist it is also deeply interesting, considering this moral influence of forests and groves, to calculate the probability of their preservation and improvement, or the possibility of their reckless destruction by the ruthless power of commerce, and the brutalized taste of uncultivated minds: the reader will therefore feel a lively interest in the following essay upon this subject, from the Horticulturist:

[ From the Rochester (N. Y.) Horticulturist. ]

PRESERVATION OF THE WOODS AND FORESTS.

"The questions, how long, at the present rate of waste and consumption, will it be before the woods and forests of the United States will have disappeared, and what will be the consequences, seem to us well worthy of attention at the present time.

" Ten years ago, ' hard wood '—Beech, Maple, Hickory, etc.—sold in the market here from $2,50. to $3 per cord, while a very large portion of the population is using coal instead of wood for fuel. The stoves now offered for sale throughout the city, are nearly all constructed for coal burning, and were it not for the general prejudice against coal as fuel, among those who have never used it, the use of wood would be totally abandoned. In a very few years it will be so. The wood market in Rochester was formerly a great feature in its street commerce; now it is scarcely noticeable. Under these circumstances, the high price wood commands, shows most conclusively how scarce it has become.

"So it is with timber for the arts. In ten years the price has advanced at least one half; and many kinds—such as Oak, Walnut, Whitewood, etc.—formerly, and but a short time ago, abundant, are now obtained with difficulty and in limited quantities. Pine lands in the southern part of the State of New York, that less than ten years ago were utterly valueless, are now held about as high as the finest wheat soil of the Genesee valley. And while this increased value of timber has taken place, railroads have penetrated the country in all directions, and opened the way to vast lumber regions that were before inaccessible. The most remote and secluded forests in the State have been invaded by the railroad and the steam saw-mill; and yet prices are advancing rapidly. This affords unmistakable evidence that it cannot be long before our woods and forests will have totally disappeared.

" Not very long ago farmers were careful of their *wood lot*—indeed, it was regarded as the most precious portion of their farm; now, as a general thing, its value chiefly consists in the dollars and cents it will command in market. The high price of wood for fuel, the increasing value of farming land, and the facility for obtaining coal by means of railroads, are inducing farmers to prosecute the work of clearing vigorously; and so the country is laid bare at a rate that persons who have not taken some note of these matters can scarcely credit. And if this has been so in the past, what will it be in the future, with a greatly increased population—doubling every twenty or twenty-five years?

" It is the right and duty of every man to manage his affairs in such a manner as to him appears most advantageous; and he who has had Pine lands in his possession for perhaps half a century, without realizing a

dollar from them, is but too glad that at last they are available; and so he loses no time in converting them into money as fast as circumstances may require or justify. So it is with the man who has valuable farming land covered with wood, that commands a high price for fuel; with farm crops at the present high prices, he regards it true economy to clear his land as quickly as possible,—and so it may be, looking only at the present. We are not finding fault with this; we should probably do the same thing if we were placed in similar circumstances; but what are to be the results? This is the point to which we call attention. In this fast age of ours, we are all so apt to become absorbed with the present engagements as to forget the future, and changes are effected with such rapidity, that the most thrifty and sagacious are behind in their calculations. Our progress outruns the most sanguine expectations; and so every day unexpected results overtake us. Beside, we are all for money-making; we value everything by the dollar. So many acres of woodland will make so many cords of wood, and by deducting the cost of chopping and carrying to market, we have its exact value. So many acres of Oak or Pine, or Hemlock forest, will make so many thousand feet of timber that will yield so much per thousand; and there's the value of that, and the *only* value. This is the way in which the importance of our woods and forests is estimated. Few they are, who stop to inquire, or to reflect for a moment, how the next or succeeding generations will procure a supply of timber,—how the face of the country will be shorn of its beauty, or the climate affected by clearing off the forests. The new States offer such inducements to emigrants, that very few persons calculate upon their children, or children's children succeeding them in the occupation of their premises; the population—a great portion of it, at least—is always on the move; and so there is no strong inducement to look far ahead, in the way of improvements. Then, among the larger portion of the agricultural population, there has not yet grown up much sensibility to the beauties of nature—the poetic element has scarcely taken root at all. The circumstances of new countries—stern necessities and arduous labors—subdue the more delicate attributes of the mind; hence we seldom hear a regret uttered at the wreck of our beautiful rural landscapes. The noblest Oaks, that the contemplative mind would associate with majesty and strength, and with a long chain of events that have transpired during the period of their existence, are worth just so much per foot for ship timber, and are remorselessly cut down; and so our finely wooded hills and groups of forests trees, that now mingle with cultivated fields and green meadows, forming a charming landscape, will soon disappear, and the face of the country will become as bare and as bald as an Illinois prairie. Would this not be a sad thing?

"We have no doubt there are men who will call us foolish for offering such an argument against the clearing process, but we hope there are not many such. Few men can be so destitute of feeling and of common

patriotism, as not to prefer that his country should be beautiful as well as prosperous. Men who reside in cities take a pride in beautifying them, and vie with each other in erecting tasteful buildings, and making other improvements calculated to excite attention and admiration. Their interest as well as patriotism, dictates such a course: and why not so in the country? Why cannot neighborhoods of farmers co-operate in plans of improvements,—in preserving portions of their woodlands,—in making good roads,—in planting avenues of trees,—and in such other works as are calculated to augment their own interests, and beautify the neighborhood. Men engaged in such works as these would experience a degree of satisfaction that the most successful money-seekers never know. Beside, such improvements as these never fail to yield a profitable return in the increased value of land. We could point out farms in many parts of the country, that have actually been doubled in their market value, by tasteful and judicious, though inconsiderable expenditure. Men seeking a habitation in the country, whether to engage in profitable agriculture or to enjoy retirement, turn their backs upon treeless districts. Indeed, without an affluence of trees and woods, no landscape can please or attract people to it. Downing says, in his Landscape Gardening:

"Among all the materials at our disposal for the embellishment of country residences, none are at once so highly ornamental, so indispensable, and so easily managed as *trees* or *wood*. We introduce them in every part of the landscape,—in the foreground as well as in the distance, on the tops of the hills and in the depths of the valleys. They are, indeed, like the drapery that covers a somewhat ungainly figure, and while it conceals its defects, communicates to it new interest and expression.

"A tree, undoubtedly, is one of the most beautiful objects in nature. Airy and delicate in its youth, luxuriant and majestic in its prime, venerable and picturesque in its old age, it constitutes in its various forms, sizes and developements, the greatest charm and beauty of the earth in all countries. The most varied outline of surface, the finest combination of picturesque materials, the stateliest country house, would be comparatively tame and spiritless, without the inimitable accompaniment of foliage. Let those who have passed their whole lives in a richly wooded country—whose daily visions are deep, leafy glens, forest-clad hills, and plains luxuraintly shaded—transport themselves for a moment to the desert, where but a few stunted bushes raise their heads above the earth, or those wild steppes, where the eye wanders in vain for some 'leafy garniture'—where the sun strikes down with parching heat, or the wind sweeps over with unbroken fury—and they may, perhaps, estimate by contrast their beauty and value.'

"Will our country friends read this carefully, and learn to appreciate-

their woodlands, and hereafter think not of laying the axe to their roots, but rather how they may best preserve and improve them. If they fail to do this, most likely they will live to regret it; and if they do not their successors surely will.

"But there are other arguments in favor of preserving our trees and woods, beside that of beautifying the landscape; if there were not, we should have less hope for them than we have.

"No man who has ever lived in the country, need be told what an influence is exercised upon the climate by scattered groups of forest trees. Any one who has traveled across an open prairie in cold, blustering, wintry weather, and then through a well-wooded region, cannot have failed to discover the difference. The most disagreeable feature, both to man and to beast, in our northern climate, is cold, cutting winds; and where their fury is unbroken, as in treeless or prairie regions, no living thing can resist them. The most hardy of our domestic animals will seek shelter, if within their reach, and like drowning men, who seize the most frail support, they may often be seen clustering around a solitary tree, a fence corner, or wherever they can discover even the appearance of shelter. Men might learn from this, if not from their own feelings, how grateful are the shade and shelter of trees, and how important it is to preserve and cultivate them.

"Is it not well known that the climate of all those portions of the country once well wooded, but now in a great measure cleared, is greatly changed for the worse. In Central New York, Peaches were grown successfully for the first twenty years or so after the settlement of the country; now they fail entirely. We have less snow, more severe cold winds, and winter wheat and other such crops much more uncertain than formerly. Our summers also are marked by extremes of heat and drouth to a far greater extent. Very much of this change is unquestionably owing to the absence of the extensive forests that formerly covered a large portion of the country; and we shall feel it yet worse than now, unless the existing remnant of them be carefully managed.

"Not long ago, we saw it stated in a French journal, that the population of certain districts had made application to the government, to aid in establishing plantations of trees, as the cutting down of the forests had so affected their climate as to render cultivation difficult and unprofitable. Emerson, in his *Trees of Massachusetts*, brings forward several facts bearing on this point. He says:

"Another use of forests is to serve as conductors of electricity between the clouds and its great reservoir, the earth; thus giving activity to the vital powers of plants, and leading the clouds to discharge their contents upon the earth. A few tall trees on the summit of a hill are sufficient to produce this effect. A charged thunder-cloud, which passes unbroken over a bare hill, will pour down its moisture, if its electricity is

drawn of by these natural conductors. The dry sterility of some parts of Spain, anciently very fertile, is probably owing, in a great degree, to the improvident destruction of the forests, and the absurd laws which discourage their renewal. The forests also coat the earth, and keep it warm in winter, shutting in the more central heat which would otherwise more rapidly radiate into space and be lost. If you would go into the woods at the end of a severe winter, you may any where easily drive down a stake, without impediment from the frost; while in the open field by their edge, you find a foot or more of earth frozen solid. Forests act not less favorably as a protection against the excessive heat of the summer's sun, which rapidly evaporates the moisture and parches up the surface. The first Mahogany cutters in Honduras found the cold under the immense forests so great, that they were obliged, though within sixteen degrees of the equator, to kindle fires to keep themselves warm.* The rain, falling on the woods of a hill-side, is retained by the deep and spongy mass formed by the roots and the accumulated deposit of leaves, instead of rushing down, as it otherwise would, in torrents, carrying with it great quantities of loose soil. Protected also from rapid evaporation, it remains laid up as in a reservoir, trickling gradually out, and forming perennial streams, watering and fertilizing the low country through the longest summers, and moderating the violence of drouths by mists and dews. All along the coast of New England, numerous little streams, which were formerly fed by the forests, and often rolled a volume of water sufficient to turn a mill in summer, are now dried up at that season, and only furnish a drain for the melting snows of spring, or the occasional great rains of autumn.

'Forests thus equalize the temperature and soften the climate, protecting from the extremes of cold and heat, dryness and humidity. There is little doubt that, if the ancient forests of Spain could be restored to its hills, its ancient fertility would return. Now there is nothing to conduct electricity, nothing to arrest the clouds and make them pour their treasures upon the earth, no reservoirs to lay up the winter's rain in store against the drouths.

'Forests protect a country from the violence of winds. The lively author of 'Life in Mexico,' writes† 'M. de Humboldt, who examined the will of Cortes, informs us that the conqueror had left sugar plantations near Cuyoacan, in the valley of Mexico, where now, owing, it is supposed, to the cutting down of the trees, the cold is too great for sugar

*"At Guina, in South America, within five degrees of the line, the inhabitants living amidst immense forests, a century ago, were obliged to alleviate the severity of the cold by evening fires. Even the duration of the rainy season has been shortened by the clearing of the country, and the warmth is so increased, that a fire now would be deemed an annoyance."—*Ure's Dictionary of Chemistry*,—article Climate.

†Volume II, p. 52.

cane, or any other tropical production to thrive." And a most intelligent gentleman in Worcester tells me, that he attributes the greater difficulty now experienced in the cultivation of the more delicate fruits in that town, to the fact that the encircling hills formerly crowned with trees, are now, to a considerable degree laid bare. The laws of the motion of the atmosphere are similar to those of water. A bare hill gives no protection. The wind pours over it as water pours over a dam. But if the hill be capped with trees, the windy cascade will be broken as into spray. Its violence will be sensibly diminished. We are not aware, on the now protected and irregular surface of New England, how important are the screens furnished by the forests. Travelers from Illinois tell us, that in the vast prairies in that, and some of the other Western States, the wind is almost always fresh, and often blows a gale, before which men can hardly stand. The new settlers are glad to shelter their habitations under the lee of the spurs of forests which stretch like promontories into the prairie lands. A forest near the coast in any part of New England, protects those further inland from the chilling east winds; and, while such winds prevail, a person passing towards the sea, experiences a marked change of temperature upon crossing the last wood, and especially the last wood-covered hill. One who would have his house screened from the northerly winds, must take care to leave behind it a hill crowned with trees, or at least to have a wood stretching from the north-west to the north-east. 'A garden surrounded by tall trees admits the cultivation, even in our severe climate, of plants almost tropical.'

'Forests not only protect from winds, they must prevent their formation. The air resting over a broken surface cannot be rapidly heated to a uniformly high temperature, so as to rise upwards in great masses and create a violent wind.'‡

Now, if forests or plantations of trees exercise such modifying influences upon climate, should not every man who cultivates the soil take a

‡'A writer in the 6th volume of the *N. E. Farmer* says, 'It is not merely in forests, nor as supplying firewood and timber, that trees are valuable. 'Considered agriculturally,' says an English writer, 'the advantages to be derived from subdividing extensive tracts of country, by plantations, are evidently great, whether considered in the light of affording immediate shelter to the lands, or in that of improving the local climate.' The fact that the climate may be thus improved, has, in very many instances, been sufficiently established. It is indeed astonishing how much better cattle thrive in fields even but moderately sheltered, than they do in an open exposed country. In the breeding of cattle, a sheltered farm, or a sheltered corner in a farm, is a thing much prized; and in instances where fields are taken by the season for the purpose of fattening cattle, those most sheltered never fail to bring the highest rents. Dr. Deane has observed, "Pasture lands should be well fenced in small lots,* * and these lots should be bordered, at least, with rows of trees. It is best that trees of some kind or other should be growing scattered in every point of a pasture, so that cattle may have never far to go in a hot hour, to obtain a comfortable shade.'

'Small lots thus sheltered, are not left bare of snow so early in the Spring as larger ones lying bare; since fences and trees cause more of it to remain on the ground. The cold winds in March and April hurt the grass much when the ground is bare; and the winds in winter will not suffer snow to lie deep in land that is too open to the rake of winds and storms.'—*N. E. Farmer.*

lively interest in preserving them, and even in creating them where none or a too scanty supply exists at present? Next to the soil itself, the climate is the most important consideration to agriculture and horticulture. It is the subject of continual apprehension and remark. The dread of intense cold, excessive heat or dryness, etc., haunts the anxious cultivator from one end of the year to the other; and in the most favorable seasons he cannot hope to escape without loss. Look back to the winter of 1853 and '54, and to last summer. Who could estimate the total loss from extremes of cold and drouth in that single season? We trust that, in these days of improvement, when everything pertaining to the rural arts is undergoing an intelligent scrutiny, the climatid influence of trees will not be overlooked. We have little hope of reaching, directly, with one word of warning, a very large number of those who wield the destinies of the woods, but we hope the readers of the Horticulturist will become missionaries in this cause, and do whatever lies in their power to stay the axe.

Hereafter we shall have something to say on the rearing of plantations in thinly wooded or prairie regions."

## VALUE OF FOREST TREES.

"Civilization uses a vast amount of wood, though for many purposes 'tis being fast superseded; but *it is not the necessary use of wood that is sweeping away the forests of the United States so much as its wanton destruction.* We should look to the *consequences* of this. Palestine, once well wooded, and cultivated like a garden, is now a desert—the haunts of Bedouins; Greece, in her palmy days the land of laurel forests, is now a desolate waste; Persia and Babylon, the cradles of civilization, are now covered beneath the sand of deserts, produced by the eradication of their forests. It is comparatively easy to eradicate the forests of the North, as they are of a gregarious order—one class succeeding another; but the tropical forests, composed of innumerable varieties, growing together in the most democratic union and equality, are never eradicated. Even in Hindostan, all its many millions of population have never been able to conquer the phœnix-life of its tropical vegetation. Forests act as regulators, preserving snow and rain from melting and evaporation, and producing a regularity in the flow of the rivers draining them. When they disappear, thunder-storms become less frequent and heavier, the snow melts in the first warm days of spring, causing freshets, and in the fall the rivers dry up and cease to be navigable. The freshets and drouths also

produce the malaria, which is the scourge of Western bottom-lands. Forests, although they are at first an obstacle to civilization, soon become necessary to its continuance. Our rivers, not having their sources above the snow line, are dependent on forests for their supply of water, and it is essential that they should be preserved."—*Rev. Dr. Hawks.*

## FLOURENS ON PHRENOLOGY.

### A GREAT GUN WITH POOR AMMUNITION.

It is well for a strong man occasionally, to be assaulted by his opponents, that he may acquire a more positive knowledge of his own strength and learn to estimate the comparative weakness of those who are considered remarkable for prowess. When PETER FRANCISCO, was assailed by a noted bully, and pitched his adversary over the fence, the trial was highly satisfactory and instructive, especially to Peter.

When the science of Phrenology has been successively assailed by Jeffrey Flourens, Sir William Hamilton, Dr. Sewall, Dr. Mussey, and Mr. Rice, the great public would no doubt consider it edifying and amusing, to see the strength of the science exerted in pitching its adversaries out of the field of progressive knowledge among the outside barbarians, who thank God that they are not misled by new fangled ideas.

The high titles and reputation of some of the opponents of Phrenology, and the grand flourishes with which their criticisms have been announced, would justify a critical review of their arguments. The attack of Flourens upon Phrenology is about the feeblest of all, notwithstanding the ostentatious manner in which it has been heralded. The review of his little book reminds one of the saying of Chancellor Oxenstiern, "with how little wisdom is the world governed."

Charles De Lucena Meigs, member of the American Philosophical Society, and Professor of Obstetrics in the leading Medical College of America, translates the work of Flourens and dedicates it to Dr. James Jackson of Boston, as a "*masterly criticism*" and "*pulverizing blow*," which has clearly "refuted the Phrenologists," to which Dr. Meigs adds, on his own responsibility, with his peculiar enthusiastic volubility, that "no Phrenologist is fit to be a juror, a judge or a legislator; for since all human law — the whole social compact — and indeed all divine law as relative to human propensities and actions,— is founded upon some real nature of the soul and mind, there is risk that manifestly erroneous conceptions of the free will, of the conscience, of the judgment and the per-

ceptive powers, &c., may mislead the juror, the judge, and the legislator in their vote, their opinion and their notion of rights and wrongs."

If so, Dr. Meigs, why did your modesty forbid the suggestion that all Phrenologists should be excluded from such offices? Would it not be well to add to our qualifications and tests for office, that before a juryman could be chosen, or a judge, or a legislator elected, the following oath should be administered; "I do solemnly swear that I consider the brain of man a matter of no importance whatever, that I do not know whether I think in the forepart or hind part of the head, that I do not believe a man can be unsound in one of his faculties, without being crazy in every one, and that I do not now believe, nor ever will believe, that one man's head can be any better than another's. Nor will I countenance and support in public or private life any individual, who encourages such pernicious "poisonous" errors, or who intimates a suspicion that the different convolutions of the brain were not all intended for exactly the same purpose." Perhaps the enthusiastic professor would think this carrying the joke too far.

But, as the French say, to "return to our mutton." The book thus announced by Dr. Meigs, contains 144 pages, but withal has so little matter that one has full time to read and digest it in two or three hours. Its title, which is its most important part, is —

"Phrenology Examined.—By P. Flourens, Member of the French Academy; Perpetual Secretary of the Royal Academy of Sciences, (Institute of France) Member of the Royal Societies of London and Edinburg, of the Royal Academy of Sciences of Stockholm, of Munich and of Turin, etc., etc. Professor of Comparative Physiology at the Natural History Museum, at Paris." [Motto] "*J'ai un sentiment clair de ma liberte.*"—(*Bossuet, Treatise on Free will.*)

Certainly such a title page, and such an introduction, would prepare us to anticipate a brilliant intellectual effort — something of the lightning of genius — something of the sledgehammer power of logic — one of those powerful efforts which would make even truth itself look like a falsehood, and give to sophistry a captivating plausibility. But, alas, the thunder is without electricity, and the pulverising blow is confined to the title page and dedication, which are by far the weightest portions of the volume.

The book contains eight chapters, and seven notes, as an appendix. In the first chapter, the author endeavors to show that other writers before Gall had located the mind in the brain, or in particular portions, as indeed Gall himself distinctly states, in his writings. Cuvier, Soemmering and Haller, distinctly recognize the brain as the organ of the mind. Cabanis considered thought a secretion of the brain as bile was a secretion of the liver. "Descartes placed the soul in the pineal gland; Willis in the corpera striata, Lapeyronnie, in the corpus callosum, &c." Cuv-

ier asserted that the proportion of the brain to the medulla oblongata, a proportion which is greater in man than in all other animals, is a very good index to the perfection of the creature's intelligence, because it is the best index of the pre-eminence of the organs of reflection above the organs of the external senses." And again he says: "In animals, the intelligence appears to be greater, in proportion, as the volume of the hemispheres is greater." "The proposition (says Flourens) that the brain is the exclusive seat of the soul, is not a new proposition, and hence does not originate with Gall. The merit of Gall, and it is by no means a slender merit, consists in his having understood better than any of his predecessors, the whole of its importance, and having devoted himself to its demonstration."

This is just and candid; so far the "pulverizing" criticism has not yet commenced. The first pulverizing blow is the wonderful discovery that the entire brain is not a mental organ, although Gall and Spurzheim regarded the brain *en masse* as the organ of the mind. According to M. Flourens, the *cerebellum, medulla oblongata* and *tubercula quadrigemina* are not mental organs, "the mental properties being confined exclusively to the convoluted hemispheres."

Really, M. Flourens, this is solemn and dignified trifling. And as neither Gall nor any other Phrenologist ever considered these parts the organs of *understanding*, as you would represent, what does your denial amount to but a humbug? A triumph over a doctrine which has no existence.

You assért that the cerebellum is an organ of muscular motion, and that an animal deprived of its cerebellum loses only its locomotive action, but the experiments of Gall and Magendie, do not co-incide with yours, and you have no right to dogmatize as though your doctrine were established. You say that an animal deprived of its medulla oblongata, loses its respiratory movements and in consequence thereof its life. You advance this fact by way of proving that the medulla oblongata is connected with respiration only, and is entirely independent of the mind. Since you are so great a stickler for special facts, especially as contained in your own memoirs on the nervous system, let me show the total falsity of your position, by reference to facts.

In the first place, the medulla oblongata is an important organ for the mind, as it is the channel through which it commands all the voluntary muscles of the human frame, excepting those about the head; moreover, when in the sucessive gradations of the animal kingdom the higher organs of the mind are removed, the mental force is efficiently concentrated nearer to the medulla oblongata, and the spinal cord, in which, at length, volition and consciousness appear to reside. In fish and reptiles, for example, there is very little brain above the medulla oblongata, and after the brain is entirely removed from the alligator, the medulla oblongata

and spinal cord, manifest intelligent volition, as the animal evidently makes intelligent movements, when wounded or disturbed.

On the other hand, life and respiration are not absolutely dependent, as you affirm, upon the medulla oblongata, as certain cold blooded reptiles will survive the loss of those parts for an indefinite period, if the temperature of the atmosphere be not too high. Your cavilling, therefore, is as groundless as peurile. You first assail a Phrenological doctrine which has no existence. Secondly, you deny to the medulla oblongata the relation to the mind which it incontestibly sustains, as you are yourself fully aware if the question were propounded. Thirdly, you cut it off from the mind to make it exclusively the sole organ of respiration, contrary to experimental facts demonstrated in vivisections upon reptiles. Fourthly, you dogmatize upon your own opinion of the cerebellum, disagreeing clearly with the established facts of Gall, Magendie, Fodere, Fossati and others; finally, you attribute to the tubercula quadrigemina no other function than the reception of the impressions from the optic nerve, contrary to the fact that cutting the quandrigeminal bodies produces violent shiverings and whirling movements. Such unscientific statements in a half educated charlatan, would not surprise us, but as their entire value consists in your supposed profundity of knowledge and accuracy of statement, such free and easy trifling with scientific facts, is not creditable to your judgment or your candor.

Nor will your assertion that intelligence resides exclusively in the convoluted hemispheres, be found to coincide with the facts. Intelligence is not exclusively confined to the convoluted hemispheres, for birds which have no convolutions display great intelligence. Fishes, in which nothing that resembles the hemispheres of the human brain can be found, possess, notwithstanding, all the intelligence that is necessary to their mode of existence, and some are even capable of being educated. And even those portions of the human brain which you would exclude from all relations with the mind, are certainly capable under some circumstances of acting as mental organs, when the convoluted hemispheres are not developed.

So much for the first "pulverizing blow, in which the critic certainly pulverizes himself by displaying the remarkable looseness and reckless inaccuracy, with which his scientific opinions are formed. After such a specimen of the value of his scientific statements, the next pulverizing blow will be received with some "grains of allowance."

Our author next brings forward an argument from data which the best Anatomists and Physiologists of Europe have condemned as nearly worthless. He says:

"It has been shown by my late experiments, that we may cut away, either in front, or behind, or above or on one side, a very considerable slice of the hemisphere of the brain, without destroying the intelligence.

Hence it appears, that quite a restricted portion of the hemispheres may suffice for the purposes of intellection in an animal.*

"On the other hand, in proportion as these reductions by slicing away the hemispheres are continued, the intelligence becomes enfeebled, and grows gradually less; and certain limits being past, is wholly extinguished. Hence it appears that the cerebral hemispheres concur, by their whole mass, in the full and entire exercise of the intelligence.†

"In fine, as soon as one sensation is lost, all sensation is lost; when one faculty disappears, all the faculties disappear. There are not, therefore, different seats for the different faculties, nor for the different sensations. The faculty of feeling, of judging, of willing any thing, resides in the same place as the faculty of feeling, judging, or willing any other thing, and consequently this faculty, essentially a unit, resides essentially in a single organ.*

"The understanding is, therefore, a unit."

For loose harum-scarum reasoning, the foregoing argument is nearly equal to the first specimen of scientific criticism. Every Phrenologist knows that experiments on one side of the brain do not destroy the general intellect, because all the organs remain complete on the other side.

Flourens should certainly have known that such experiments are worth nothing, unless the vivisections are made in a corresponding manner on both sides of the head.

He should also know that no such slicing of the brain could be expected to obliterate intelligence, unless the front lobe be removed in which the intellectual organs are seated. I have no opportunity of referring to the experimental researches in the nervous system published by M. Flourens, but as it has never been reported that he has destroyed any portion of the brain, according to the principles of Phrenology, and found the faculties still manifested, I cannot suppose that his experiments have thrown any light upon the subject. On the contrary the best Anatomists and Physiologists of the present day, regard all such experiments in vivisection as futile and unprofitable, and condemn them as barbarous and useless; one reason for which is, that animals have so limited faculties and no language to express their emotions. Until M. Flourens has succeeded in convincing his scientific cotemporaries, that his experiments on the brain have really proved something, we may be excused for regarding them as worthless. It may be very true, that formidable injuries to the brain do, as Flourens says, greatly impair the entire intelligence, for they disturb the whole brain and speedily destroy life itself. But such results prove only that the brain is necessary to our mental and physical vigor, which every one knows. What then can be learned

†Ibid.

*See my Recherches Empérimentales sur les proprietées et les fonctions du Système Nerveux.

from this second argument of Flourens? What doctrine does it "pulverize," or what does it amount to?

The third critical blow of Professor Flourens, against Phrenology, is chiefly a matter of metaphysical verbiage. He complains greatly of Gall for speaking of the different organs as though each exercised a considerable portion of the understanding, which he thinks militates against the doctrine of our conscious mental unity. But as Gall still recognizes one central unitary principle or soul, which exercises the different organs, this labored criticism to show that he destroys the conscious soul, is a mere waste of words—a tweedle-dum and tweedle-dee distinction, having no relation to any important principle of the science.

So much for the third pulverizing blow. The fourth and last blow of this chapter consists of a criticism upon Gall's doctrine of moral liberty or free will. Gall considered our free agency to be the power of acting with the organs which we have, and carrying out our wishes by acting according to the motives which we prefer. With this, Flourens is entirely dissatisfied—conceiving that man is no free agent, unless he has the power of acting without any motive at all, and contrary to his dominant motives or wishes—in fact, contrary to his own will. This wayward and crapricious notion of free agency, would be applicable only to a lunatic. But, however absurd the ideas of Flourens on this subject, it is needless to discuss them, for the whole question as to the nature of our free agency, is a question entirely foreign to the truth of Phrenology, which it cannot affect, however it may be determined. This finishes the pulverizing blows of the first chapter, not one of which strikes really at the science of Phrenology, or would inflict the slightest mischief if it did.

(TO BE CONTINUED.)

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## A PLAIN TALK ON PHRENOLOGY.

### NO II.—INTELLECT.

To determine the intellectual power of any individual, we should first observe his temperament, in order to know in what manner, and with what vigor his intellectual organs act.

If he presents the characteristics of the Bilious or Occipital temperament, we may attribute to his intellectual organs, considerable energy or power in accomplishing valuable results, by persevering industry. He will be capable of a degree of mental cultivation and exercise sufficient to give him an active and superior mind. If the Sanguine temperament appears to predominate, he will be less inclined to steady intellectual pursuits, and will not generally attain so perfect a degree of mental culti-

vation, although he may manifest under excitement a greater amount of intellectual force and eloquence, or transient display of genius. If the Nervous temperament predominates, the intellectual activity may be quick and brilliant, but there will not be that strength in the mind which qualifies the individual for leading any important enterprise, or making his intellectual power appreciated by his fellow men.

If the Lymphatic temperament predominates, the intellect, however clear or profound it may be, will make but little impression upon society, being better adapted to receive impressions than to give them.

The Bilious Nervous is doubtless the best temperament for strong intellectual manifestations.

Having settled the matter of temperaments, we will look to the general form of the head, for the special developement of the intellectual organs.

If in a profile view the forehead appears prominent, and the line from the ear to the upper part of the forehead, is unusually long, we may pronounce the intellectual developement large. In large heads a line from the cavity of the ear to the upper part of the organ of Foresight, measures by a pair of calipers 5.4 or 5.5 inches; in a small head it would measure less than 5 inches, sometimes as low as 4.5. If you have not a pair of calipers, a piece of tape will enable you to measure from ear to ear over the top of the forehead. This measurement will be 13 inches, in cases of large intellectual developement, or about 10 inches where the developement is small. (From the cavity of the ear.)

If the whole forehead projects over the face, it gives a more decided indication of the predominance of intellect. But in many cases of large intellectual developement the face is also large, and the forehead has but little comparative projection. This is more apt to be the case with persons of large frames, who have generally well developed faces. The proportion between the forehead and the face, as indicated by the facial angle, is not a correct indication of mental power, for one with a very prominent face, and consequently with a rather small facial angle, might still have a well developed forehead, and a great deal of intellectual vigor, as was the case with the celebrated negro chief Toussaint.

In determining the activity of the intellectual regions, it will also be necessary to look to the breadth and prominence of the Occiput in the region of Adhesiveness and Sleep. If that region be flat and the head narrow, the intellectual power will be extremely active and clear. There will be a great liability to that over action which exhausts the physical constitution. But if it be broad, full, and rounded, the intellect will be less capable of extraordinary efforts, and less liable to exhaust the physical constitution by overaction.

Having settled this matter, we may observe the comparative developement of the upper, middle and lower regions of the forehead. If the

upper part of the forehead alone be prominent, the middle and lower regions being defective, the individual will probably be a man of good sense and of clear understanding, without much aptitude for details, and without the capacity for acquiring any very large stock of knowledge of facts. He may be ready in argument, clear in his explanations, and correct in his opinions, but is not apt in the details of business, and does not well remember special facts, unless they are connected with principles. He is easily embarrassed in attending to matters which are very complex in their details. In relating an anecdote, he gives the substance, but sometimes varies in the details, which he can supply more readily by imagination than by memory. It is very important for such an individual to simplify his business so as not to be embarrassed by a variety of details, and petty engagements. In intellectual pursuits, his proficiency is not very rapid, and studies which he neglects are apt to disappear slowly from his memory, but whatever he masters he understands thoroughly, and however limited his information he manifests in his conversation an intelligence which inevitably commands your respect.

If on the other hand the lower portion of the forehead projects, with a decided deficiency in the region above, making a narrow retreating forehead, we find the individual apt in business and conversation; his stock of knowledge renders him fluent and interesting, and his statements accurate and instructive. In scientific and literary pursuits, he may figure as a learned man. As a physician, he will practice his profession with facility and dispatch; as a lawyer, he will be especially successful in recollecting authorities and mastering the details of complex testimony. As a military leader, he will manifest ability in action; and in short, in all the pursuits of life, he will be a ready, well informed, intelligent man, except in those cases where superior strength of judgment is required to overcome difficulties. When capacities for planning and contrivance are required, or where profound reasoning is requisite, to understand a complex subject — in all such cases, where it is necessary to be profound or original, or where strong reasoning powers are requisite, the man with a narrow and retreating forehead, is not very successful; he is liable to errors in judgment, errors in planning, and errors in reasoning, which may be fatal to his success. He can prosecute his business in the old routine with activity, or he can illustrate his subject by displaying the extent of his information, but he fails in wisdom — and however extensive his learning — however showy he may be, he is seldom original.

A very common form of forehead is that of those who are well developed in the lower range of perceptive, and the upper range of reflective organs, with a depression between them, across the middle of the forehead; such persons may have strong minds, profound understanding, clear observation, and accurate scientific ideas, with excellent capaci-

ties for business or literature, but they are defective in memory and have a difficulty in becoming learned. They cannot systematically bring out their knowledge when wanted.

If on the other hand the general form of the forehead be round, presenting the greatest developement across the middle, between the upper and lower range, memory is the leading characteristic of the mind. There may be great mental strength, or a very feeble intellect, according to the aggregate developement of the forehead. But memory, or the power of accumulating knowledge, will be more marked than the other faculties.

Very frequently, however, we see persons manifesting marked predominance of a portion of the organs, when the forehead presents nothing unusual. Thus, for example, Mr. H., whose forehead is regularly formed, does not display any great strength of mind or accuracy of observation, although he is remarkable for his learning, and for the facility with which he can entertain company, by narrating his reminiscences and detailing matters of literary information acquired from his library; the explanation of which is, that he has been cultivating his memory all his life, by devotion to books and languages, which have been the chief objects of his ambition. On the other hand, Mr. B., whose forehead is nearly regular in developement, has devoted his life mainly to reasoning and investigation, and consequently finds it difficult to become learned and accurate, and still more difficult to recollect and attend properly to the duties of his daily business. Another gentleman occurs to my memory, whose forehead might indicate philosophic capacities, but who has only cultivated himself as an artist, and having only a feeble temperament with moderate education, his philosophic capacities, if he has any, are entirely unknown.

We must not therefore expect that all well developed organs will display much power, if they are among feeble, uncultivated brains, in which all the organs are weak, nor must we expect every strong faculty to be accompanied by organs of extraordinary size, for its strength may be owing to the greater amount of efficient cultivation.

In judging intellectual developement, we should be especially careful not to suppose that small organs indicate deficient faculties. If the temperament is active, and the mind well cultivated, even the smallest organs in such cases may be sufficiently active to enable the individual to compare favorably with his fellows.

It is therefore indispensable to look to temperament and education as well as developement for accurate conclusions. Temperament and education, may bring out vigorous displays from organs of medium size, but they cannot elicit great powers without large organs.

The lower range of perceptive organs, lying along the brow, is devoted to physical observation, and when well developed is generally accompa-

nied by superior delicacy and vigor, in the external senses. The vision, especially, is quick, active, and comprehensive.

The developement of the perceptive organs produces a prominent brow which grows down upon the eyes, leaving but a small space between the eye-ball and the brow. This is the form which generally prevails among good hunters, marksmen, artists, laborers, business men, and others who excel in physical observation.

Let us now look at the breadth of the forehead. A broad forehead generally indicates an original, ingenious mind. Breadth of the lower part, produces the inventor and composer. Breadth in the upper part produces the philosophic originator of doctrines, systems and schemes. Extreme breadth produces that remarkable tendency to originality, which results in great eccentricity—a quality more apt to be displayed, when there is a considerable degree of independence and moral courage, or of self-will and obstinacy, to make the individual indifferent to public opinion. A narrow forehead, has not much originality, or capacity for examining complex subjects. It may perceive clearly whatever it grasps, but it cannot unite a great variety of considerations, and master with facility a complex philosophical subject.

## PRESENTIMENTS.

That the human mind possesses the power under some circumstances of dimly foreseeing, and sometimes even of distinctly realizing future events in a mysterious manner, beyond the powers of reason, is a proposition so well sustained by facts that few would doubt, if those facts were generally known. Unfortunately facts which prove propositions not generally accredited, are too often overlooked or suppressed. The following incidents are but a few of those which have recently transpired and acquired notoriety. They are compiled from the newspapers.

Singular Presentiment of Death. — A most singular presentiment of death occurred a few days ago in the family of Mr. George Fisher, in Reisterstown, Baltimore County. His little son Fillmore, aged about four years, awoke in the night and called for his mother to know if she was awake. He then asked if his father was awake, and afterwards told his mother that he was going to die. The parents thought nothing more about it, and the child slept comfortably until morning. When he awoke in the morning he repeated his presentiment to his parents; and as soon as breakfast was over insisted on being allowed to go and tell Mrs. Walters, a neighbor, that he was going to die. He made a visit to his grandmother, and also to Mrs. Walters, after which he returned to his

home. During the afternoon of the same day his mother was called out for a few minutes, and when she returned she found the little fellow awfully burned by his clothing having taken fire. As soon as the fire was extinguished he said to his mother, "I told you I was going to die." A physician was called in, who dressed his injuries, telling him that he would soon be well. He said, "No, Fillmore is going to die;" and during the night the little boy breathed his last. This was a most extraordinary presentiment, and during the whole day he spoke of dying, though he had enjoyed excellent health. The boy is said to have been a very sprightly and interesting child, and was beloved by all who knew him.—*Baltimore American.*

A few nights ago a little boy of rare intelligence, named Fillmore, son of G. Fisher, residing in Reistertown, Baltimore county, about the midnight hour, awoke his mother and informed her that he was going to die. He told his father the same thing, and when told he was dreaming, replied that he was awake and knew that he was going to die. The parents thought nothing more about it, and the child slept comfortably until morning. When he awoke in the morning, he repeated his presentiment to his parents; and as soon as breakfast was over he insisted on being allowed to go and tell Mrs. Walters, a neighbor, that he was going to die.

His mother told him that he had better go and see his grandmother, if he was going to die. He made his visit to his grandmother, and also to Mrs. Walters, after which he returned to his home. During the afternoon of the same day, his mother was called out of the house for a few minutes, and when she returned she found the little fellow awfully burned by his clothes having taken fire. As soon as the fire was extinguished he said to his mother, "I told you I was going to die." A physician was called in who dressed his injuries, telling him that he would soon be well. He said, "No, Fillmore is going to die;" and during the night the little fellow breathed his last. This was a most extraordinary presentiment, and during the whole day he spoke of dying, though he enjoyed excellent health.—*Baltimore Republican, Feb.* 2.

Here is a singular occurrence we find "going the rounds." We copy it from the Centerville (Va.) Times, the editor of which "vouches for its entire truth."

Under the obituary head in to-day's paper will be found the death of Mr. Jacob Reese. On the day of his death, Mr. Reese was engaged in seeding oats, and toward evening was startled by a voice apparently at his elbow saying, "You may sow but you shall not reap." He looked around, and, seeing no one, continued his work of seeding, attributing it, as he afterwards said, to his imagination. At every step, however, the warning was repeated, and, at last, unable to bear it, he proceeded home

to his wife. He was persuaded by her that it was only imagination, and finding that he had no fever and did not complain of any unusual indisposition, she induced him to return to the field. There, however, the same solemn, warning voice attended him at every step—"You may sow, but you shall not reap"—and in a state of extreme agitation, again he quit work and went home. He took an early supper, was shortly after attacked with a swelling in the throat, and before sunrise the next morning was a corpse.

More Prophetic Dreams.—We find the following account of a spiritual premonition of death in the last number of the Windham county *Telegraph*, printed at West Killingly, in this State:

Died in this village, on Sunday Feb. 11, Mary Woodworth, aged 14 years.

A somewhat singular incident is told us in connection with the above death. A sister of the deceased died on the 23d December, and a few weeks after her death Mary dreamed that her dead sister appeared to her and bade her be ready, for in two weeks she should come and take her away. The parents thought little of the dream, and we do not learn that the mind of the girl was particularly impressed by it; but as it has proved, only a day or so more than two weeks from the date of the dream has found her numbered with the dead, her remains side by side with the sister who in life was to her dearest—in death uppermost in her mind—and now perhaps their freed spirits enjoy sweet and eternal communion in the world above.

Mysterious Warning.—The other morning a young girl some twelve or fourteen years of age, residing in the family of one of the editors of this paper, arose from her bed and remarked to another girl, who slept in the same room with her, that she thought something must be wrong at home, as she dreamed she saw her little brother, and he looked as if he was dead—and since she was up she still saw his face every way she turned—still looking as if he was dead. She dressed herself and went down stairs to pursue her work; but less than fifteen minutes afterwards, word was brought her that her brother had died that morning.—*Zanesville Courier.*

Presentiment of death.—A young lady about sixteen years of age,—Miss Maria Gilbert, of Brooklyn, New York, furnishes another proof of the strange realization which some persons have of impending dissolution. This young lady upon retiring one night, informed her sisters that she was going to see her mother in a short time. Her sisters of course ridiculed the idea, especially as their mother had been dead a number of years, and the sister was well and had always enjoyed good health. About three o'clock the next morning, however, hearing a groan, they went to their sister's room and found her breathing her last. Such is life.

A Paris letter writer says:

"By the way, three persons who had booked their names for a passage on the *Arctic*, escaped quite singularly the disaster which would have threatened to count them among its victims. One arrived at Liverpool only a few minutes after the departure of the steamer. The others — a gentleman and his wife — had engaged their passage here in Paris; but the lady dreamed at night that she was suddenly wakened in her berth, and saw the water flooding the cabin, and felt the dreadful sensation of sinking in the ocean. The dream made so painful an impression upon her, that she induced her husband to go to the office of Messrs. Monroe & Co., in the Rue de la Paix, and exchange their places for others in a succeeding steamer."

SAVED BY A PRESENTIMENT. — Charles Lever, the novelist, was coming over to the United States in the Arctic, the trip that she was lost, and was persuaded by his wife to defer his visit on account of a very remarkable presentiment she had against it.

The foregoing presentiments have obtained their notoriety in consequence of their remarkable and tragic character, while hundreds of other presentiments, of a less striking character, pass unnoticed, or at least unpublished.

## SUPERSTITIONS OF ROME.

(From the correspondence of the New York Times.)

"The superstitions of Rome properly dilated upon would form an attractive book. There is the Scala Santa, or Sacred Staircase, taken, as the legend goes, from Pilate's House in Jerusalem. Therefore the Savior must have ascended and descended it many a time and oft. It has had a house built for it here, and the marble steps are covered by open-worked wooden ones, which have several times been worn away and renewed. Penitents ascend this stairway on their knees, only at the same time meditating, as the instructions say, upon the passion of our Lord. They come down again, by either of two parallel flights, and in the ordinary way, upon the flat of their foot. There are twenty-eight steps, and for every one ascended, a late Pope granted seven years' indulgence, a grant which has been made permanent by his present Holiness.

"At the top of the staircase is a portrait of the Savior, at the age of twelve, by St. Luke. It is needless to say that the authenticity of these relics is attested only by tradition, and that the Church can adduce no positive proof. One of our American sculptors, resident here, has seen the remains of Pilate's house, at Jerusalem, and measured the vacancy left by the missing staircase. On his return he measured the Scala Santa, and found it would exactly fit. The Church would certainly be a

great bungler if it did not take heed to the possibilities of so obvious a contingency.

"Then there is the Santissimo Bambino, or Most Sacred Baby. This is a figure in wood, about two feet long, representing the infant Savior It was carved by a friar on the Mount of Olives, and while the latter was sleeping in the intervals of his whittling, was painted by St. Luke, who was a very prolific artist. This sacred brat has the miraculous power of curing diseases, and sick people send for him as they might for Baron Louis or Dr. Francis. He receives more money—in diamonds and votive offerings—than all the physicians in Rome. He is all stuck over with gems and precious stones, and is decidedly the most effulgent idol I have ever seen.

"He has a state coach in which he makes his professional visits. During the Republic, and while the Pope was at Gaeta, the triumvirate gave his Holiness' equipage to the Bambino, but the French took it away again. The sacred baby's festival occurs at the Epiphany. On this occasion the altar of his Church—the Ara Cœli— is converted into a stage, and the nativity is played by pasteboard marionettes as large as life. The moneys received by the Bambino go a great way toward supporting his church. An eminent American lawyer here says that any society in America which should, on any other pretence than that of religion, and indeed, he thinks even upon religious pretences, levy a contribution upon the community in such a way as this, would be indicted for swindling, by the Grand Jury.

"Then as to the mortal remains of St. Peter. They claim to repose in the Confessional of St. Peter's Church, and one hundred and twelve lamps, which are forever burning, hang around his tomb from a circular balustrade of marble. The Church can adduce no evidence that will satisfy a skeptic, or even one willing to be convinced, as to the reality of this pretension, but of course the faithful ask for no assurance beyond the authority of the Pope. In the same Church, the famous bronze statue of the Apostle, the toe of which is so constantly kissed, has been pretty well proved to be none other than the heathen statue of Jupiter Capitolinus.

"The Church of St. John of Lateran possesses the table on which the Last Supper was eaten. The only proof is a legend of the vaguest sort. It also shows (visitors always paying for the show) the mouth of the Well of Samaria, a column split when the veil of the Temple was rent in twain, and a miraculous slab with a hole through it. This hole was made by the passage of a quantity of consecrated bread, which fell from the hand of a priest who doubted the Real Presence.

"The Church of Santa Maria has a painting of the Madonna by St. Luke. The authenticity of this portrait was doubted for centuries, until a Pope settled the question by declaring it genuine in a bull issued for that purpose.

"Santa Croce exhibits one day in Easter week, the 'True Cross,' on which the Savior was crucified. By the word 'True' you will understand that this is the real cross, as distinguished from the numerous counterfeits that are palmed off upon a credulous and indulgent public. Santa Croce has no connection with any other establishment.

"The Basilica of St. Paul, just outside the walls, contains the bones of the Apostle from whom it derives its name.

"St. Sebastian has a large pile of relics of dubious authenticity. The most impudently grotesque assumption is that of a block of marble which bears the impress of two human feet. These *relievi* are those of the Savior, and the impression was made at the moment when St. Peter said to him, '*Domine quo vadis?*' This was after the resurrection of Christ, he having appeared to the saint as the latter was proceeding to Rome to be crucified with his head downward. The church is built over a portion of the Appian Way where this scene took place, and the pavement with the sacred stone, slightly raised from its level, forms part of its floor.

"St. Francesca has a stone upon which St. Peter kneeled, and, in consequence it bears two evident depressions, in which two knees would certainly fit very nicely.

"In one Santa Maria is a spring which has existed since the days of St. Paul, and was miraculously created by him, to enable him to baptize his disciples. In another, Santa Maria is a warlike picture of the Madonna which obtained for its votaries many victories over the Turks.

"St. Paul of the Fountains is built upon the spot where the Apostle was beheaded. It contains the block of marble upon which the execution took place; and shows the three miraculous water sources which bubbled from where the martyr's head bounded three times from the earth.

"The Church of San Pietro in Vincoli, was built expressly to preserve the supposed chains with which the Apostle was bound at Jerusalem.

"Santa Pressede owns, but on no account shows, the portrait of our Savior, presented by St. Peter to a certain Pudius, the father of St Prassede, and the first convert made by St. Paul at Rome.

"Santa Pudeuziana has the very altar at which St. Peter officiated. and well in which Pudeuziana collected the blood of 3,000 martyrs.

"In the famous dungeons known as the Mamertine Prisons, built by Ancus Martius and Servius Tullius, where the accomplices of Cataline were strangled, where Jugurtha died of hunger and where Sejanus and Perseus of Macedonia were long imprisoned, was also confined St. Peter, by Nero. The guardian shows you the spring which sprang forth when the Saint had need of water to immerse the forty penitent jailors. The visitor tastes this water, and can hardly fail to pronounce it sweet and refreshing, in a scene so sickening as that presented by this profoundly subterranean cell. In a stone of the stairway is the impress of a human

profile, distinctly traceable. This was made by St. Peter's side, when a brutal turnkey jammed the martyr violently against the wall.

"San Pietro in Montoro is built upon the precise spot where the Apostle was crucified, in an inverted attitude. In a hole extending rather deeply into the ground, hangs a lantern, and further down is buried the identical cross. It is never shown, as, according to the sacristan, it is in a poor state of preservation, and is sadly in want of repair. I have no doubt the original mess of pottage is somewhere to be seen in Rome, kept in sacred cubby, and covered over by a cathedral.

"A place is shown which was once inhabited by St. Dominic, the founder of the Inquisition, who received letters from Heaven written by the Holy Trinity. However, this is a lower order of blasphemy than that indulged in at a little old house at Siena, which produces the love correspondence of the Savior and St. Catherine. I hardly expect to be believed when I say that letters are shown which profess to have been written to her by our Lord. Those written to her husband Jesus Christ, and to her mother-in-law, the Virgin Mary, may be seen by anybody. The exact spot is also pointed where the Savior and St. Catharine stood when they were married, and where the wedding ring was put upon her finger.

"Now, in regard to all these assumptions, impostures, and impossibilities, it must not be supposed that they are the inventions and creations of cicerones, handbooks, and fanatical sacristans. The Pope is guaranty for them all, and the Church is responsible for them, one and severally. Where no evidence exists, evidence is coined, or in some way trumped up, or, better than all, a Papal bull declares no evidence to be necessary. The Vatican, armed with infallibility, pronounces without appeal upon the authenticity of any relic which may be judged valuable, either for the collection of fees, the promotion of church influence, or for the extension of idol worship. For instance, the 'Sacred Baby,' declared to be the work of St. Luke, and put forward as a miraculous healer of diseases—for which services he makes the most extortionate charges—is perfectly well known by the Church to be a gross imposition.

"This, as well as all the paintings and other works attributed to the Evangelist, has been quite conclusively proved to be due to one Messer Luca, a Greek artist of a much later period. Of course it was as easy for the Catholic Church to transmute Mr. Luca into St. Luke, for its own purpose, as it was for Barnum to manufacture Joyce Heth out of an octogenarian negress. The difference is that Barnum has owned up, while the Church is still deriving profit from its numerous and well-stocked museums. The Pope will one day deliver lectures on the Philosophy of Humbug too. His disclosures will be much more degrading to the world, however, than those of Barnum's were to America: for the former is an institution, while the latter is but a man.

'A curious assumption of the Romanists—one forced upon the view throughout Italy—is that Christ bore his cross, unassisted, and that he fell under it fourteen times. Not only is there nothing in the Bible to support this version, but three of the Evangelists, Matthew, Mark and John, if I remember right, distinctly state that Simon the Syrenean was made to bear the cross. I cannot say how many steepling, winding, lanes around and in Rome, are now made to represent the *Via Crucis*—the Way of the Cross—with pictures of the fourteen stages or stations. The one most singularly located is that in the interior of the Colosseum, where fourteen poor frescoes, framed in wood, planted in the ground and set round at intervals, illustrate the Passion of our Lord.

"The list of relics and miraculous images might be extended to infinity. I have not spoken of the oldest Madonna in Rome, which on one occasion being irked at being shut up in her closet during mass, broke open the door for herself. Nor of the canonized handkerchief, which bears the impress of the Savior's face. Nor of the Bocca della Verita, a marble slab in the ground, with holes pierced for eyes, nose and mouth, into the latter incision of which, whoever puts his hand and swears falsely, will never be able to withdraw it. Nor of a thousand other impious degrading dodges by which the Catholic Church stoops to conquer."

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## PHRENOLOGY IN THE PULPIT.

BY REV. HENRY WARD BEECHER.

"It is very hard for a minister of the gospel, standing before a promiscuous audience, to deal with the facts of their minds, and of their inward lives. It is a melancholy fact, that men know less of that which is the very element of their being, than about anything else in the world. I suppose if I were to go among the intelligent men in my congregation, I could get every variety of information on subjects connected with the daily business affairs of life—upon questions of political economy, upon various questions of commerce, facts concerning the structure of ships steam-engines—I could collect any amount of information on all these, and a thousand other kindred subjects. But when I ask them *what is inside of themselves*, they can tell me of a great manufactory, and explain to me the operation and use of all the machinery in it; but upon the question of the machinery of their own minds, they cannot say a word.

In regard to commercial matters, they know all about them; they have examined them, they have compared their ideas on these subjects, and have classified them. They believe themselves to be immortal creatures, that they have throbbing within them a soul that shall live as long as God himself shall live; yet, when I ask them any questons in regard

to their inward nature, their only reply is, 'I don't know.' They do not know what their REASON is; they do not definitely understand the nature or operation of any one faculty of the mind.

"They understand the nature of the soil of the earth; they know what it is capable of producing; they know the use of the plow and all the implements of agriculture; they know what to do with a plant that is not thriving, they are skilful to implant to it a fresh life and make it flourish. But if any plant that ought to grow in the mind is stunted and does not thrive, they cannot tell how to make that grow. They don't know what to do to bring it forth.

"It is difficult for a minister of the gospel to set forth the truth intelligibly in respect to its relation to the human mind. I think it is partly because men have not been curious in respect to themselves, and partly on account of the many bewildering systems of mental philosophy that are in vogue in our day. For if there were none of these systems except the old schools of metaphysical philosophy, I would defy any man to obtain by means of them any clear idea about the soul, for at best they are of but little more value than so many cobwebs. Men may study them, however, if they have a taste for them; if a man loves logic and discussion, let him take one of the old metaphysical philosophies, and he will find means of busying his mind until he gets tired of such business. But if a man wishes to know practically what he is made up of, if a man wishes a knowledge of human nature for definite practical purposes, there is no system which will aid them in acquiring that knowledge like the system of PHRENOLOGY; not interpreted too narrowly or technically, but in its relations to physiology and the structures of the whole body. And I may say here, what I have never said before in the pulpit, that the views of the human mind, as they are revealed by Phrenology, are those views which have underlaid my whole ministry; and if I have had any success in bringing the truths of the gospel to bear practically upon the minds of men, any success in the vigorous application of truths to the wants of the human soul, where they are most needed, I owe it to the clearness which I have gained from this science. And I could not ask for the members of my family, nor of a church, any better preparation for religious indoctrination, than to put them in possession of such a practical knowledge of the human soul as is given by Phrenology.

"I have avoided the use of the nomenclature of Phrenology in the pulpit as far as possible, because I did not wish to seem to be a mere teacher of a philosophical system, while I was a minister of the truth as it is in Christ; but I have now been so long with you that I am justified in making this statement.

"I may say in regard to the objections sometimes urged against Phrenology, its tendency to materialism and fatalism, that the same objections may be made to any other system of mental philosophy. I

do not think that such objections belong to Phrenology any more than to any system of intellectual science you can possibly construct. Men's mere logical and speculative reason will always strand them upon the sands of fatalism or materialism;—and it is the practical sense, the consciousness of actual liberty, that redeems us from a belief of the one or the other. Such doctrines dwell in the *head*, but never in the HEART.

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THE COWARDICE OF SCIENCE.—"Nothing is more evident to day than that the men of facts are afraid of a large number of important facts. All the spiritual facts, of which there are plenty in every age, are denounced as superstition. The best attested spirit stories are not well received by that scientific courtesy, which takes off its new hat to a grave beetle, or a fresh alkaloid. Large winged science behaves worse to our ancestors than to our vermin. Evidence on spiritual subjects is regarded as an impertinence by the learned, so timorous are they and so morbidly fearful of ghosts. If they were not afraid they would investigate; but nature is to them a churchyard, in which they whistle their dry tunes to keep their courage up. As the matter stands, we are bold to say that there is no class that so little follows its own rules of uncaring experiment and induction, or has so little respect for facts as the hard-headed scientific man. They are attentive enough to a class of facts that nobody values, or to beetles, spiders and fossils, but as to those dear facts that common men and women, in all time and place, have found full of interest, wonder, or importance, they show them a deaf ear and a callous heart. Science, in this, neglects its mission, which is to give us a transcript of the world, and primarily of that in the world which is nearest and dearest to the soul."—*Wilkinson's Life of Swedenborg*.

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HOME MADE CHLORIDE OF LIME.—"Professor Nash says, take one barrel of lime, and one bushel of salt; dissolve the salt in as little water as will dissolve the whole; slack the lime with the water, putting on more than will dry slack it, so much that it will form a very thick paste; this will not take all the water; put on, therefore, a little of the remainder daily, until the lime has taken the whole. The result will be a sort of impure chloride of lime, but a very powerful deodorizer, equally good for all out door purposes, with the article bought under that name at the apothecary's, and costing not one twentieth part as much. This should be kept under a shed, or some out building. It should be kept moist, and it may be applied wherever offensive odors are generated, with the assurance that it will be effective to purify the air, and will add to the value of the manure much more than it costs. It would be well for every farmer to prepare a quantity of this, and have it always on hand.—*Cultivator*.